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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,199	10/16/2001	Byung-Gi Jung	1594.1010	3194

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EXAMINER	
HOLLINGTON, JERMELE M	

ART UNIT	PAPER NUMBER
2829	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	09/977,199	JUNG, BYUNG-GI	
	Examiner	Art Unit	
	Jermele M. Hollington	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7-13 and 17-23* is/are rejected.

7)☒ Claim(s) *4-6 and 14-16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. 2/24/05
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 7-13 and 17-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kress (6439631).

Regarding claims 1 and 23, Kress discloses [see Figs. 1-2] a semiconductor device loading apparatus (pick and place head 41) for test handlers (pick and place device shown in col. 3, lines 61-62), comprising: a body (gripper mechanism 31) including a plurality of pickup cylinders (air cylinders 10) provided with a plurality of vacuum adsorbers (vacuum tip 12) to vacuum-suck and to transfer semiconductor devices [not shown in Figs but see col. 1, lines 5-9] to be tested, a space adjusting plate (pantograph 44 see Fig.4) to adjust pitches of the vacuum adsorbers (12) [see col. 2, lines 45-64], and an elevation guiding unit (combination of gearbox 48, servo motor 46 drive pulley 52 and drive shaft 50) to guide one of lifting and lowering of the

space adjusting plate (44), and a guide block fixing plate (guide rail 9) separate from the body (31) to guide the semiconductor devices to be accurately positioned in pockets of a test tray [not shown], respectively.

Regarding claim 2, Kress discloses said space-adjusting plate (pantograph 44) is provided with a plurality of guide slots (beams 15 and 16) formed to allow spaces there between to be downwardly narrowed so as to adjust the pitches of the vacuum adsorbers (12), and said vacuum adsorbers (12) are each provided with a guide projection (sub plate 33) adapted to insert to a respective one of the guide slots (15 or 16).

Regarding claim 3, Kress discloses said guide block fixing plate (9) is positioned to be downwardly spaced apart from the vacuum adsorbers (12) and upwardly spaced apart from the test tray, and is provided with guide blocks (guide blocks 42) of a number equal to a number of the pockets of the test tray [not shown].

Regarding claim 7, Kress discloses [see Figs. 1-2] a semiconductor device loading apparatus (pick and place had 41), comprising: a plurality of device loading units (gripper mechanisms 31) to load semiconductor devices [not shown but see col. 1, lines 5-9], a space adjusting unit (pantograph 44 shown in Fig. 4); and an elevation control unit (combination of gearbox 48, servo motor 46 drive pulley 52 and drive shaft 50) coupled to the space adjusting unit (44) and controlling an elevation of the space adjusting unit (44) to change a spacing between respective adjacent device loading units (31) in accordance with the elevation of the space adjusting unit (44).

Regarding claim 8, Kress discloses a guide block-fixing unit (guide rail 9) provided adjacent to the plurality of device loading units (31) to guide the semiconductor devices there through to pockets of a test tray [not shown], respectively.

Regarding claim 9, Kress discloses said space adjusting unit (44) comprises: a plurality of space changing units (beams 15 and 16) corresponding to the plurality of device loading units (31) to change each respective spacing between adjacent device loading units (31).

Regarding claim 10, Kress discloses [see Fig. 4] each respective spacing between adjacent device loading units (31) is narrowed, when the elevation of the space-adjusting unit (44) is increased.

Regarding claim 11, Kress discloses [see Fig. 5] each respective spacing between adjacent device loading units (31) is widened, when the elevation of the space-adjusting unit (44) is decreased.

Regarding claim 12, Kress discloses each space changing unit (15 and 16) comprises: a guide slot (link points 18) formed on the space adjusting unit (44); and a guide projection (sub plate 33 with screws see Fig. 2) formed on a respective one of the device loading units (31) to insert into the guide slot (18) corresponding to a respective one of the device loading units (31).

Regarding claim 13, Kress discloses the guide block-fixing unit (9) is remote from the device loading units (31) and the test tray, and is provided with guide blocks (guide block 42) of a number equal to a number of the pockets of the test tray [not shown].

Regarding claim 17, Kress discloses the plurality of device loading units (31), the space-adjusting unit (44) and the elevation control unit (combination of gearbox 48, servo motor 46 drive pulley 52 and drive shaft 50) move separately from the guide block-fixing unit (9).

Regarding claim18, Kress discloses [see Figs. 1-2] a method of loading a semiconductor device with a loading apparatus (pick and place head 41) for test handlers (pick and place device see col. 3, lines 61-62), comprising: adjusting pitches of vacuum adsorbers (vacuum tips 12) by one of lifting and lowering of a space adjusting plate (pantograph 44), vacuum-sucking and transferring [via gripper mechanism 31] the semiconductor devices to be tested to the plurality of vacuum adsorbers (12), and guiding [via guide rail 9] the vacuum-sucked and transferred semiconductor devices to be positioned in pockets of a test tray, respectively.

Regarding claim 19, Kress discloses changing [via combination of gearbox 48, servo motor 46 drive pulley 52 and drive shaft 50)] a spacing between adjacent device loading units in accordance with an elevation of a space adjusting unit (44) by controlling an elevation thereof, and loading the semiconductor devices in accordance with the changed spacing.

Regarding claim 20, Kress discloses passing each of the semiconductor devices through a guide block (guide block 42) to position the semiconductor devices on a test tray.

Regarding claim 21, Kress discloses the changing of the spacing between adjacent device loading units (31) comprises: narrowing of the spacing [see Fig. 4], when the elevation of the space-adjusting unit (44) is increased.

Regarding claim 22, Kress discloses the changing of the spacing between adjacent device loading units (31) comprises: widening of the spacing [see Fig. 5], when the elevation of the space-adjusting unit (44) is decreased.

Conclusion

Response to Arguments

4. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

5. Claims 4-6 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: regarding claims 4 and 14, no prior art has been found to provide guide blocks with an opening sized equal to a size of each of the semiconductor devices, and with a pair of guide pins downwardly extending from front and rear edges thereof. Since claims 5-6 depend from claim 4 and claims 15-16 depend from claim 14, they are also considered to contain allowable subject matter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (517) 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jermele M. Hollington
Patent Examiner
Art Unit 2829

March 7, 2005